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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/235,158	01/22/1999	JOSHUA SUSSER	50253-216;P3	5104

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EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT PAPER NUMBER

2126

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/235,158

Applicant(s)

SUSSER ET AL.

Examiner

Lewis A. Bullock, Jr.

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 25-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 25-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 20,21 . 6) ☐ Other: \_\_\_\_\_

**bDETAILED ACTION**

***Information Disclosure Statement***

1. The information disclosure statement filed 12/9/02 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because there is no translation of the not considered foreign documents. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 37-40 are rejected under 35 U.S.C. 102(b) as being anticipated by “Java Card 2.0 Programming Concepts” by SUN.

As to claim 37, SUN teaches a method of operating a small footprint device (Java Card), comprising the step of: preventing access (access) from one program module (applet) to a different program module (applet) using a context barrier (applet firewall)

(pg. 7, Applet Isolation, "An applet firewall prevent one applet from accessing the contents or behavior of objects owned by other applets."; pg. 2, Multiple Applets, "However, Java Card provides...in which multiple applets can discover each other, communicate, and share data in a limited manner, while still maintaining protection from each other in the form of a firewall between applets.").

As to claim 38, SUN teaches small footprint device (Java Card) implements a virtual machine (Java virtual machine) (pg. 3, Lifetime of the Virtual Machine). It is inherent that since the context barrier (applet firewall) runs on the system having a virtual machine that it is implemented using a virtual machine.

As to claim 39, SUN teaches the program modules (applets) are run in separate contexts (pg. Vii, Terminology, Applet execution context; pg. 8, first paragraph).

As to claim 40, SUN teaches the context barrier (applet firewall) prevents access from one program module (applet) to a different program module (applet / object) (pg. 7, Applet Isolation and Object Sharing).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 25-36, and 41-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Java Card 2.0 Programming Concepts" by SUN.

As to claim 1, SUN teaches a small footprint device (java card / smart card) comprising: at least one processing element (virtual machine / operating system process) (pg. 3, Lifetime of the Virtual Machine), and a context barrier (applet firewall) running on the processing element (pg. 7, Applet Isolation and Object Sharing), for isolating program modules (applets / objects) from one another (pg. 7, "An applet firewall prevent one applet from accessing the contents or behavior of objects owned by other applets."; pg. 2, Multiple Applets, "However, Java Card provides...in which multiple applets can discover each other, communicate, and share data in a limited manner, while still maintaining protection from each other in the form of a firewall between applets."). However, SUN does not explicitly mention that the device has memory and that the context barrier uses the memory. It is well known in the art that a device has memory and therefore obvious that the device would have memory for storing program modules and other functionalities of the device.

As to claims 25 and 26, SUN teaches the processing element is a virtual machine on a card system (virtual machine) (pg. 3, Lifetime of the Virtual Machine). However, SUN does not teach that the virtual machine runs on a processor or an operating system. It is well known in the art that a virtual machine runs on a processor

or an operating system and therefore obvious that the virtual machine of Sun runs on a processor or an operating system.

As to claims 27 and 28, SUN teaches the applet firewall prevents one applet from accessing the contents or behavior of objects owned by other applets (pg. 7, Applet Isolation and Object Sharing) and that when one applet invokes another applet's objects, the JCRE performs applet context switch to allow the code in the objects applet to perform the method invocation operation (pg. 8, Applet Isolation and Object Sharing). Therefore it is obvious that the program modules (applets) are run in separate contexts since in order to invoke another applet a context switch has to occur.

As to claims 29 and 30, SUN teaches that each applet has its own context (Applet execution context) (pg. vii, Terminology). It is well known in the art that an execution context has a memory space or name space. Therefore, it is obvious that the applets have their separate memory spaces or name spaces for each applets execution.

As to claim 31, SUN teaches the program modules are a plurality of applets (pg. 2, Applet Design Concepts).

As to claim 32, SUN teaches the context barrier (applet firewall) prevents access from a principle (applet) in one context to an object in a different context (applet) (pg. 7,

Applet Isolation and Object Sharing, "An applet firewall prevent one applet from accessing the contents or behavior of objects owned by other applets."; pg. 2, Multiple Applets, "However, Java Card provides...in which multiple applets can discover each other, communicate, and share data in a limited manner, while still maintaining protection from each other in the form of a firewall between applets."). It is inherent that since the context barrier prevents object access to an applet not owning the objects (pg. 7) that the context barrier enforces a security check on the applet accessing of the object.

As to claim 33, SUN teaches the program modules (applets) are run in separate contexts (pg. Vii, Terminology, Applet execution context; pg. 8, first paragraph).

As to claim 34, SUN teaches the context barrier (applet firewall) prevents access from one program module (applet) to a different program module (applet / object) (pg. 7, Applet Isolation and Object Sharing).

As to claims 35, 36, 41-43, It is inherent that since the context barrier prevents object access to an applet not owning the objects (pg. 7) that the context barrier enforces a security check of the principle accessing the object. Also, It is obvious since the firewall only allows the owning applet to access its objects (pg. 7, The owning applet always has full privileges to use and modify the object.), that the check must involve

whether the applet and object are part of the same execution context, i.e. same name space or memory space agreement.

As to claims 44-51, SUN teaches that an applet is allowed access to another applet and its objects through the applet firewall (exceptions to this restriction) when they are not part of the same context if the principal is authorized to perform the action, via the JRCE (pg. 7-8, Applet Isolation and Object Sharing) wherein the principal applet context switches to the recipient applet to invoke the method. It would be obvious that the applet performs a security check to determine the execution context. It is also obvious that the receiving applet invokes another applet for its objects.

As to claim 52 and 53, reference is made to a computer program product which corresponds to the method of claim 1 and is therefore met by the rejection of claim 1 above.

As to claims 54 and 55, reference is made to a computer program product which corresponds to the method of claim 1 and is therefore met by the rejection of claim 1 above.

As to claims 56-58, SUN teaches a context barrier (applet firewall) on a small footprint device (java card) for separating a plurality of programs (applets) on a small footprint device by running them in respective contexts (execution context) (pg. 7-8,



Applet Isolation and Object Sharing). It is inherent that the firewall has program code in order to function on the java card system. However, SUN does not teach that the code is sent over a communications link. It is well known in the art that computer code is downloaded from a developer system or server system to an implementation system or client system. Therefore, it is obvious to one skilled in the art that the code of the firewall is shipped or downloaded from a server system to a client system.

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (703) 305-0439. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alvin E. Oberley can be reached on (703) 305-9716. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0286.

A handwritten signature in cursive script, reading "Lewis A. Bullock Jr." with a stylized flourish at the end.

lab  
February 24, 2003